

**NBF/GTSP INTERIM ACTION  
SOIL REMEDIATION PROJECT**

**SECTION 02300  
SOIL EXCAVATION,  
HANDLING, AND DISPOSAL**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. This section specifies general requirements for excavation, handling, and disposal of contaminated soil during implementation of the interim action soil remediation project.
- B. Soil interim action levels (IALs) have been established for the project as discussed in the NBF and GTSP Interim Action Work Plans. Soil with constituent concentrations exceeding IALs, as outlined in the respective work plans, is considered contaminated soil. All soil excavated from the NBF/GTSP project area shall be disposed at an approved offsite landfill facility and shall not be reused onsite.
- C. Contaminated soil is present at various locations and depths as identified on the Drawings. Soil with total PCB concentrations greater than or equal to 50 mg/kg is identified as “TSCA soil” and soil with total PCB concentrations less than 50 mg/kg but greater than the IAL is identified as “non-TSCA” soil. TSCA soil shall be handled separately from non-TSCA soil and shall be managed and disposed as TSCA waste at a permitted Subtitle C landfill facility. Non-TSCA soil shall be managed and disposed as solid waste at a permitted Subtitle D landfill facility.
- D. Contractor shall conduct contaminated soil excavation and handling activities in a carefully controlled manner that will limit the volume of contaminated soil to be excavated and transported for offsite disposal.

**1.02 REFERENCES**

- A. WAC 173-340 - Model Toxics Control Act (MTCA)
- B. 40 CFR 761.61 – PCB Remediation Waste
- C. 29 CFR 1926 - Safety and Health Regulations for Construction
- D. 29 CFR 1910 - Occupational Safety and Health Regulations.
- E. WAC 296-155, Safety Standards for Construction Work, including Part N, Excavations, Trenches, and Shoring.
- F. R.C.W. Chapter 49.17 Washington Industrial Safety and Health Act (WISHA).
- G. R.C.W. Chapter 39.04.180 Public Works/Trench Excavations - Safety Systems Required.

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**1.03 QUALIFICATIONS**

- A. Personnel engaged in hazardous materials work shall be Hazmat, OSHA, and WISHA certified. Conduct earthwork associated with known or potentially contaminated materials in accordance with Contractor's site-specific health and safety plan prepared in accordance with Section 01350.
- B. Contaminated soil transportation work shall be performed by properly licensed, insured, and registered waste haulers that are acceptable to the Owner. Transportation contractor(s) shall submit documentation that demonstrates it is properly licensed and in compliance with applicable DOT regulations, as well as a copy of its contingency and spill control plans describing measures to be implemented in the event of spills or discharges during material handling and transporting.

**1.04 SUBMITTALS**

- A. Following Notice to Proceed and prior to starting contaminated soil excavation work, submit a construction plan that includes a detailed description of the proposed means and methods and construction sequencing to perform the work. This plan shall be subject to review and approval by the Owner, and shall include, as a minimum, drawings indicating the proposed material and equipment storage areas and haul routes, the proposed location the stockpiles for contaminated soil and clean backfill materials, and details regarding:
  - 1. Excavation equipment and procedures.
  - 2. Survey control to achieve soil removal elevations..
  - 3. Handling, loading, and transporting contaminated soil to the designated offsite disposal facilities.
  - 4. Design and installation of temporary excavation shoring and dewatering.
  - 5. Design and installation of soil stockpile dewatering cells as needed to remove free liquids prior to loading soil for offsite disposal, as well as the proposed method for collection and handling dewatering water.
  - 6. Cleanup, equipment decontamination, and disposal of residual materials.
- B. Daily logs showing amounts of soil required to be removed by the Owner that are in addition to that shown on the plan documents.
- C. Upon completion of the work, submit an as-built report documenting the soil cleanup activities, including daily logs and summary forms, as-built drawings and surveyed locations for contaminated soil excavations, and certified weight receipts documenting the weight of materials transported to and disposed at the designated offsite disposal facilities.

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**PART 2 – PRODUCTS**

**2.01 MATERIALS**

- A. Furnish all equipment, supplies, and materials necessary to perform the soil excavation, handling, transport and disposal activities.,

**PART 3 – EXECUTION**

**3.01 GENERAL**

- A. Conduct all required contaminated soil earthwork activities in accordance with the requirements of the Contract Documents, Contractor's approved construction plan(s), and as otherwise directed by the Owner to successfully complete the soil removal work . Coordinate the work with the Owner to limit adverse effects of the work on other activities at the site.
- B. Contractor operations will require work in a potentially hazardous environment. Ensure adequate protection for all personnel, comply with all health and safety requirements of Contractor's site-specific health and safety plan, and perform construction equipment decontamination as specified. Modified Level D protection shall be the minimum level of protection for intrusive work associated with excavation and handling of contaminated site soil and other activities with a potential for exposure to contaminated materials.
- C. Implement traffic control, utility and monitoring well protection, air emissions control, drainage and erosion control, spill prevention and pollution control, equipment decontamination, and all other controls needed to protect environmental quality during the work.

**3.02 TEMPORARY EXCAVATION SHORING**

- A. Excavation safety is the sole responsibility of Contractor. Compliance with OSHA, 29 CFR Part 1926, Subpart P and WAC 296-155, Part N is mandatory.
- B. Design, furnish, install, maintain, and remove temporary excavation shoring, as needed to complete the work, in accordance with requirements in Section 02200.
- C. Where a sloped excavation infringes on or potentially endangers or compromises an existing site facility or feature, provide temporary shoring, sheeting, and bracing as required to complete the soil excavation.

**3.03 SOIL EXCAVATION AND HANDLING**

- A. Survey and stake the limits of contaminated soils to be removed. Establish an excavation plan for each contaminated soil area identified for excavation and disposal.
- B. Excavate contaminated soil to the slopes and grades indicated on the Drawings, adjusting the excavation depth based on the Owner's ongoing observations and directions. Following completion of contaminated soil removal, resurvey the excavation at each boundary coordinate

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and at other spot locations within the excavation as needed for as-built documentation purposes, and as specified in Section 01720.

- C. Excavate all contaminated soil within the designated soil removal areas using an excavator with a smooth blade bucket, or equivalent equipment, such that a smooth and regular excavation surface is obtained and soil being removed is prevented from being mixed with the underlying soil.
- D. Conduct all soil excavation and handling activities in a manner that prevents the movement, spillage, or other deposition of contaminated soil material or associated stormwater runoff on uncontaminated areas of the site, portions of the excavation completed to final excavation depth, or into the NBF stormwater drainage system.
- E. Contaminated soil shall be temporarily stockpiled within the excavation area as appropriate for subsequent loading and transportation to the designated offsite disposal facilities. Construct temporary material processing/stockpile areas at locations approved by the Owner. Line, berm, and cover material processing/stockpile areas as necessary to protect the environment and prevent the spread of contaminated soil and water during material handling activities.
- F. Excavated contaminated soil that contains free liquids shall be dewatered and/or stabilized as required prior to loading for offsite disposal. Wet soil stabilization shall be accomplished by mixing with drier excavated soil and/or allowing the soil to drain and dry in a dewatering cell until the material is acceptable for transportation and disposal. Stabilization by adding non-biodegradable adsorbent materials to wet soil to be loaded for offsite disposal shall be subject to approval by the Owner.

#### **3.04 FREE PRODUCT RECOVERY/DISPOSAL**

- A. If any free petroleum hydrocarbon product is encountered during removal of contaminated soil in any designated excavation area (including the GTSP former fuel tank area, contain and collect free product released from the soil excavation using absorbent pads and booms, temporary berms and containment structures, skimmer pumps and hoses (if appropriate), and storage tanks. Contain and collect released product in a manner that minimizes the amount of water collected along with the product.
- B. Dewater and dispose of absorbent pads at the designated solid waste landfill, and dispose of petroleum hydrocarbon product released from the soil as liquid waste at a properly licensed disposal facility approved by the Owner.

#### **3.05 CONFIRMATION SOIL SAMPLING AND ANALYTICAL TESTING**

- A. The Owner will collect and analyze soil samples from selected exposed surfaces within the soil excavation areas following removal of contaminated soil to determine whether site cleanup levels have been achieved. Laboratory testing will require up to 4 working days to obtain and evaluate results for analyzed samples, and Contractor shall sequence and schedule its work accordingly. Contaminated soil excavation areas shall be protected from disturbance and shall not be backfilled until directed by the Owner.

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- B. If cleanup levels are not achieved at one or more excavation sample locations, the Owner may direct Contractor to excavate additional soil for offsite disposal.
- C. Any re-excavated areas shall be re-surveyed by Contractor and may be re-sampled and tested by the Owner, as described above.

**3.06 CONTAMINATED SOIL LOADING, TRANSPORT AND DISPOSAL**

- A. Load and transport contaminated soil for disposal at the landfill facilities designated or approved by the Owner.
- B. Cover and tarp all loads of contaminated soil prior to exiting the site, unless otherwise approved by the Owner.
- C. Provide proper manifesting of the material, and provide legible copies of certified weight receipts or other documentation certifying the total weight of material transported to the designated landfill disposal facility.

**3.07 EXCAVATION BACKFILLING**

- A. Obtain the Owner's approval prior to placing excavation backfill material. Place and compact backfill material in accordance with Section 02315.

**END OF SECTION**

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